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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,707	08/10/2001	Motoo Nishihara	8029-1028	4268

466 7590 04/20/2007  
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EXAMINER
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DUONG, FRANK

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

09/925,707

Applicant(s)

NISHIHARA, MOTOO

Examiner

Frank Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-31, 33-36, 39-51 and 53-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 15-23, 43-48, 53-59, 61 and 62 is/are allowed.
- 6) ☐ Claim(s) 24, 25 and 49-51 is/are rejected.
- 7) ☒ Claim(s) 26-31, 33-36, 39-42 and 60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is a response to communications dated 10/25/05 and 02/21/07. Claims 1-13, 15-31, 33-36, 39-51 and 53-62 are pending in the application.

### ***Response to Amendment***

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### ***Specification***

4. The abstract of the disclosure is objected to because of using legal phraseology, i.e., means. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

5. Claims 59-61 are objected to because of the following informalities:

As per claim 59, line 1, the term "frame transfer system" should be changed to -- frame transfer method-- for it depends from claim 24, a method claim.

As per claim 60, line 1, the term "frame transfer system" should be changed to -- frame transfer method-- for it depends from claim 25, a method claim.

As per claim 61, line 1, the term "frame transfer system" should be changed to -- frame transfer device-- for it depends from claim 21, a frame transfer device.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 49-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims fail to clearly define the metes and bounds of the claimed invention Applicants seek to protect. The claims call for a "frame transfer system" but fail to clearly identify the elements/means for performing the functional statements recited in the claims. Moreover, it is unclear where the delineation between the preamble and the body of the claims. Furthermore, the recitation of "the logical path stores" is not understood. "The logical path" is an optical/physical path between the devices. It is clearly that "the logical path" is not capable of "storing" anything. Perhaps the

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Applicants should further amend the claims to replace "the logical path stores" with some sort of storage, i.e., buffer, memory, for storing.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 24-25 and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al (Unified Transport Network for Future Peta Bit Network, IEEE, pages 25-32, June 2000) (hereinafter "Yamada").

Regarding **claim 24**, in accordance with Yamada reference entirety, Yamada discloses a frame transfer method (*Fig. 3*), comprising the steps of:

connecting frame transfer devices by plural physical channels (*Fig. 3 depicts ingress edge routers ERs are connected to egress edge routers ER in a WDM network through multiple Photonic Adaptation Paths*) and managing logical paths varied with user traffic and priority of the user traffic (*page 26, section 3.1, it is disclosed photonic adaptation layer (PAL) frames are transmitted on each PAL path according to its path label located on its header. It is also disclosed thereat multiple data destined to the same egress (destination) with the same priority can be mapped into a single PAL frame*);

forming path frames (*PAL frames*) that have a fixed frame length with respect to each logical path (*page 26, section 3.1, it is disclosed PAL frame encapsulates IP packets/ATM cells/STM data uniformly*) and operate on transfer schedule (*routing table*) to transfer data (*page 26, section 3.1, it is disclosed routing table is managed and maintained by a carrier who administrates the network*); and

setting the path frame length and transfer cycle according to an allowable delay period ( $T$   $\mu$ sec interval) and a parameter of burst property of user traffic (*multiple-fold of fixed size*) (*page 27, section 3.2.2, it is disclosed techniques to generate frames and its effectiveness in term of packet processing complexity in total network by normalizing each frame, aggregate frames can be exchanged into burst having multiple-fold of fixed size, which makes it possible for each burst to be passed through*).

Regarding **claim 25**, in addition to features recited in base claim 24 (see rationales discussed above), Yamada also discloses wherein the physical channels are optical channels (*Photonic Adaptation Paths in WDM Network of Fig. 3 are optical channels*), further comprising a step of transferring path frames (*photonic adaptation layer PAL frames*) on the optical channels (*Photonic Adaptation Paths*) (*transferring of PAL frames are discussed on page 26, section 3.1*).

As per **claim 49**, the claim calls for limitations reflect that of claim 24. Thus, it is rejected by the same rationales discussed above.

As per **claims 50-51**, Figure 8 on page 32 clearly shows the limitations of buffers at Edge Router A and Edge Router B; a scheduler for transmitting/outputting PAL frames with sequence number in a round robin manner.

***Allowable Subject Matter***

8. Claims 1-13, 15-23, 43-48, 53-59 and 61-62 are allowed.
9. Claims 26-31, 33-36, 39-42 and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, considered individually or in combination, fails to fairly show or suggest:

The claimed invention of claims 1-13, 15-18 and 20, comprising, among other limitations, novel and unobvious limitations of *"wherein a header part of each path frame comprises i) a field for storing a path number to identify the logical path, ii) a field for storing an ordinal number attached to the path frame at the time of forming the frame, and iii) a pointer field indicating positional information of the first user packet, which first user packet is stored in a payload part of the path frame,"* structurally and functionally interconnected with other limitations in a manner as recited in claims 1-13, 15-18 and 20.

The claimed invention of claim 19, comprising, among other limitations, novel and unobvious limitations of *"wherein the control frame transmitting means executes transmission control according to errors on OCHs connecting the frame transfer device,"* structurally and functionally interconnected with other limitations in a manner as recited in the claim.

The claimed invention of claims 21 and 62, comprising, among other limitations, novel and unobvious limitation of "*wherein the path frame length and transfer cycle are set according to an allowable delay period and burst property of user traffic,*" structurally and functionally interconnected with other limitations in a manner as recited in claims 21 and 62.

The claimed invention of claim 22, comprising, among other limitations, novel and unobvious limitation of "*a means for requesting disposal or retransmission of a path frame, when an error is detected in the path frame,*" structurally and functionally interconnected with other limitations in a manner as recited in the claim.

The claimed inventions of claims 26-31, 33-36, 39-42 and 60 have novel subject matter in the manner as recited.

### ***Response to Arguments***

11. Applicant's arguments with respect to the pending claims in the amendments dated 10/25/05 and 02/21/07 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jha (USP 6,771,663).

Jha (USP 6,847,644).



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Nishihara (USP 6,970,478).

Delvaux (USP 6,775,305)

Vallee et al (USP 5,608,733).

Golmie et al, A Differentiated Optical Services Model for WDM Networks, IEEE, pages 1-13, 2000.

Takagi et al, A Proposal of New Data Link Protocol, Universal Data Link, for High-Speed IP/ATM-Hybrid and IP-Centric Transport Networks, IEEE, pages 1259-1263, 2001.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**FRANK DUONG**  
**PRIMARY EXAMINER**

April 13, 2007